A Publication of the 18th MEDCOM Preventive Services Directorate

"Preserving the Fighting Strength"

UPDATE

Disease Non-battle Injury in the Korean Theater

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INTRODUCTION

This month's focus is on deployment health surveillance and the medical preparations for service members being deployed in support of Operations Noble Eagle and Enduring Freedom. The Army Office of the Surgeon General reports that over 15,000 Army personnel have been processed for deployments, but less than 1,000 Pre-Deployment Health Assessments have been received by the Army Medical Surveillance Activity. As this requirement is relatively recent, many providers being asked to medically prepare a service member for such a deployment may be unaware of the proper process. Already a number of service members stationed in Korea have participated in Operation Enduring Freedom. The information that follows is meant to provide you with an overview of deployment surveillance activities and some of the medical requirements for preparing personnel for these operations.

Deployment Health Surveillance

The preventive medicine mission is the prevention of disease and non-battle injuries among soldiers. Traditionally, this has been accomplished through heat index monitoring, disease surveillance, sanitation inspections, pest surveillance, and water quality assurance. After Operations Desert Storm and Desert Shield, U.S. health officials realized that modern-day deployments can result in exposures to environmental contaminants and toxic industrial materials. Such exposures may pose health threats to service members, especially in areas where there is uncontrolled pollution or poor or degraded environmental practices. Additionally, toxic industrial materials can be effective weapons of mass destruction in either domestic accidents or when intentionally used in military scenarios. Thus, the picture of Force Health Protection has enlarged, and assessment and surveillance of environmental factors and overall soldier health has taken on even greater importance for today's military.

The contemporary commander's operational risk management process now incorporates the results of surveillance and monitoring of these occupational environmental health (OEH) threats in the battle field. OEH threats include:

- Ionizing and non-ionizing radiation
- Biological wargare agents
- Vector-borne disease agents
- Chemical warfare agents
- Environmental pollutants
- Toxic industrial materials
- Physical agents

New environmental monitoring requirements for deployments means more equipment and more training for Preventive Medicine Detachment soldiers here in Yongsan. PFC Chen of the 38th PM Detachment prepares the MiniVol ambient air monitor for 24-hour sampling during training provided through USACHPPM-PAC.

Microscopes go to the battlefiels: CPL Kim of the 38th PM Detachment sorting Anopheles species mosquitoes for testing using the VecTest in order to assess the malaria vector threat on-site and determine appropriate control measures.

New technologies to enhance environmental assessment include the MultiRAE® photo ionization detector/multi-gas monitor and the Malaria VecTest™. The MultiRAE® provides the unit with the direct reading capability to monitor explosive and toxic gases. The Malaria VecTest™ enhances the unit's capability to continuously monitor mosquito vectors, focus vector control and eradication efforts, and deliver cost-effective prevention of disease.

--contributed by MAJ Lisa Forsyth

Pre-Deployment Screenings and Recommendations

An additional aspect of the enlarged arena for deployment health surveillance focuses on screening soldier medical health conditions and concerns. Service members deploying to regions without fixed medical facilities for longer than 30 days must complete a pre-deployment screening form. This is a very short and quick questionnaire which reviews overall health and deployment readiness. These forms must be reviewed by a medical provider, then mailed to the address at the end of this article. If the service member does not endorse any medical problems or concerns, a 91W can sign the form. Otherwise, a physician, physician assistant, or nurse practitioner must review the form and decide whether the concerns require consultation and if they prevent deployment. The original is placed in the HREC, while a copy is sent to the Army Medical Surveillance Activity (AMSA). The address is included at the end of this article.

It must be kept in mind that force protection, and thus the deployment screenings, are a ***commander's*** responsibility. However, as medical providers, we are responsible for supporting their efforts.

After the deployment is completed, a post-deployment screening form must be completed. The requirement is for the post-deployment screening to be completed in theatre or within five days of return to home station. This is very much like the pre-deployment form, but encourages the service member to relate health concerns that may have developed during the deployment. Again, if the service member does not

endorse any medical problems or concerns, a 91W can sign the form. Otherwise, a physician, physician assistant, or nurse practitioner must review the form and ensure the service member's concerns are appropriately addressed through consultation either with primary care provider or through a specialty clinic. The original is placed in the HREC, while a copy is sent to the Army Medical Surveillance Activity (AMSA). Post-deployment serum specimens should also be collected and forwarded to the repository. Copies of these forms are provided at the end of this publication.

Recommendations for Afghanistan:

- Vector-bite prophylaxis (includes mosquitos, ticks and sandflies), to include permethrin-treated uniforms, DEET to exposed skin, and use of permethrin-treated bednets.
- Malaria prophylaxis is also required for some areas. The disease is present in Afghanistan from May to October at elevations less than 2000 meters. It occurs in Pakistan and some areas of Uzbekistan year-round. Chloroquine-resistant falciparum malaria occurs in these regions. Two treatment options are available. Either regimen MUST be followed by a 14-day course of primiquine (26.3mg PO QD) upon return. G-6PD testing is recommended.
    - Mefloquine 250mg PO weekly for two weeks prior to travel, then once weekly during stay and ending four weeks after return. If the service member will be arriving in the theatre in less than two weeks, an acceptable alternate regimen is mefloquine 250mg PO QD for 3 days, then weekly as above.
    - Doxycycline 100mg PO QD beginning three days prior to travel and continuing for four weeks after return (must be taken faithfully and at approximately the same time of day for effectiveness) is an acceptable alternative for flight personnel and mefloquine-allergic personnel.
- PPD testing
- HIV test within twelve months of deployment.
- Pregnancy testing for females is recommended, as pregnant females are non-deployable.
- 90-day supply of any/all medications.
- Ensure active duty personnel have had DNA submitted. Serum specimens must be collected for forwarding to the central repository. DNA collection is encouraged for deploying civilians as well.
- Ensure routine immunizations are up-to-date. ALL immunization data on deploying personnel must be entered into MODS (see http://www.mods.army.mil/ for more information).
    - A polio booster is recommended, as wild-type polio is still transmitted in the region.
    - Hepatitis B series
    - Hepatitis A series
    - Meningococcal vaccine within the last 5 years
    - Measles: either one shot as an adult or serologic evidence of immunity unless born prior to 1956.
    - Influenza vaccine
    - Current typhoid vaccine coverage
    - Yellow fever vaccination within the last ten years
    - Pneumococcal vaccine is required for asplenic (anatomical or functional) persons every six years.
- Update the Deployment Health Record (DD2766) and ensure it travels with the service member.
- Dental exam must be current. Dental records will also go with the service member.
- Reviewing the 'Staying Healthy in Afghanistan' brochure (also included at the end of this publication and available at http://chppm-www.apgea.army.mil/deployment/shg/Tri-Fold/Afghanistan_Pakistan_%20SHG001_0302.pdf) with the service member is also recommended, to emphasize safe food and water consumption, sunscreen use and other health protection measures.

Recommendations for the Phillipines:

- Vector-bite prophylaxis, to include permethrin-treated uniforms, DEET to exposed skin, and use of permethrin-treated bednets.
- Malaria prophylaxis is also required. Chloroquine-resistant falciparum malaria occurs in this region. Either of the following medications may be used instead. Either regimen MUST be followed by a 14-day course of primiquine (26.3mg PO QD) upon return. G-6PD testing is recommended.
    - Doxycycline 100mg PO QD beginning three days prior to travel and continuing for four weeks after return (must be taken faithfully and at approximately the same time of day for effectiveness)
    - Mefloquine 250mg PO weekly for two weeks prior to travel, then once weekly during stay ending four weeks after return. If the service member will be arriving in the theatre in less than two weeks, an acceptable alternate regimen is mefloquine 250mg PO QD for 3 days, then weekly as above.
- There are no specific PPD testing requirements currently.
- HIV test within twelve months of deployment.
- Ensure routine immunizations are up-to-date, including a current influenza vaccination. Hepatitis B series is required for all medical personnel and those who may be exposed to blood or body fluids.
- Japanese Encephalitis series is required.
- Pregnancy testing for females is recommended. Pregnant females are ineligible for deployment.
- 90-day supply of any/all medications.
- Update the Deployment Health Record (DD2766) and ensure it travels with the service member.
- Dental exam must be current. Dental records will also go with the service member.
- Ensure active duty personnel have had DNA submitted. Serum specimens must be collected for forwarding to the central repository. DNA collection is encouraged for deploying civilians as well.
- Reviewing the 'Staying Healthy in The Phillipines' brochure (also included at the end of this publication and available at http://chppm-www.apgea.army.mil/deployment/shg/Tri-Fold/Philippines_SHG011_0302.pdf) with the service member is also recommended, to emphasize safe food and water consumption, sunscreen use and other health measures.

Mail completed Pre-and Post-Deployment Screenings to:

Army Medical Surveillance Activity
Building T-20, Rm 213
ATTN: Deployment Surveillance
6900 Georgia Ave, N.W.
Washington, DC 20307-5001

Additional guidance on complying with Deployment Health Surveillance Requirements is available at: http://chppm-www.apgea.army.mil/deployment/MCM-0006-02%201FEB2002.pdf .

The 18th MEDCOM Preventive Medicine Consultant is always available for questions regarding travel medicine, deployment health surveillance, malaria prophylaxis and more at DSN 736-3025.

Errata Corner: Sometimes, despite our best efforts, mistakes happen.

APR02 Issue: One source of malaria data was incorrectly attributed on page 3. The department is correctly titled 'Ministry of Health and Welfare, Korea.' This department governs the National Institute of Health, Korea.
Also, on the first page of the DNBI Trends, the total number of deaths should be 1 (one), not 0 (zero).

Foot-and-Mouth Disease: Recent Outbreaks in Korea

Foot-and-mouth disease (FMD) is one of the most contagious hoofed animal diseases. Cattle, pigs, sheep, goats and deer can be infected. Camelids, however, appear to be much less susceptible. It is caused by a virus, and can rapidly spread through a herd. It is important to realize that it does not cause human disease. FMD has a low mortality rate in adult animals, but often has a high mortality rate in young animals when the virus infects the myocardium more easily. Once infected, however, the animal loses its economic value.

Because of its potential for very serious and rapid spread, irrespective of national borders, its potential for serious socio-economic consequences, and its effects on the international trade of animals and animal products, the Office International des Epizooties (OIE) has named foot-and-mouth disease a List A disease. Other List A diseases include avian influenza, Rift Valley fever, and swine influenza.

The virus

The virus causing food-and-mouth disease belongs to the picornavirus family. It is an RNA virus with seven immunologically distinct serotypes (A, O, C, Asia 1, SAT1, SAT2, SAT3) and over 80 sub-serotypes. It is preserved by refrigeration and freezing, but progressively inactivated by temperatures above 50°C. The virus can be inactivated by sodium hydroxide, sodium carbonate, and citric acid, but is resistant to iodophores, quaternary ammonium compounds, hypochlorite and phenol, especially in the presence of organic matter. The virus will survive in lymph nodes and bone marrow of infected animals at neutral pH, but is destroyed in muscle at pH<6.0, such as occurs in rigor mortis. The virus can also persist in contaminated fodder and the environment for up to a month, depending on temperature and pH levels. The virus can persist for up to 9 months in the oropharynx of convalescing or exposed vaccinated sheep, 30 months in cattle, and even longer in water buffalo.

Transmission

FMD is can be transmitted among animals in three ways: direct contact with infected animals, indirect contact and through airborne transmission. Well animals may contract the disease through direct contact with the drainage from the sores, saliva, semen, milk and even stool of infected animals. Disease transmission can occur at least four days prior to the onset of clinical symptoms. Indirect transmission through contact with contaminated caretakers, vehicles, water, feed (including the meat and by-products of infected animals in which the pH has remained above 6.0), and even farming tools can also spread the disease. An increasingly important mode of transmission is airborne transmission. Airborne transmission is felt to be the key in the spread of foot and mouth disease across the temperate regions of the globe. The virus can be spread up to 60 kilometers over land, and up to 300 kilometers over open waters.

Symptoms

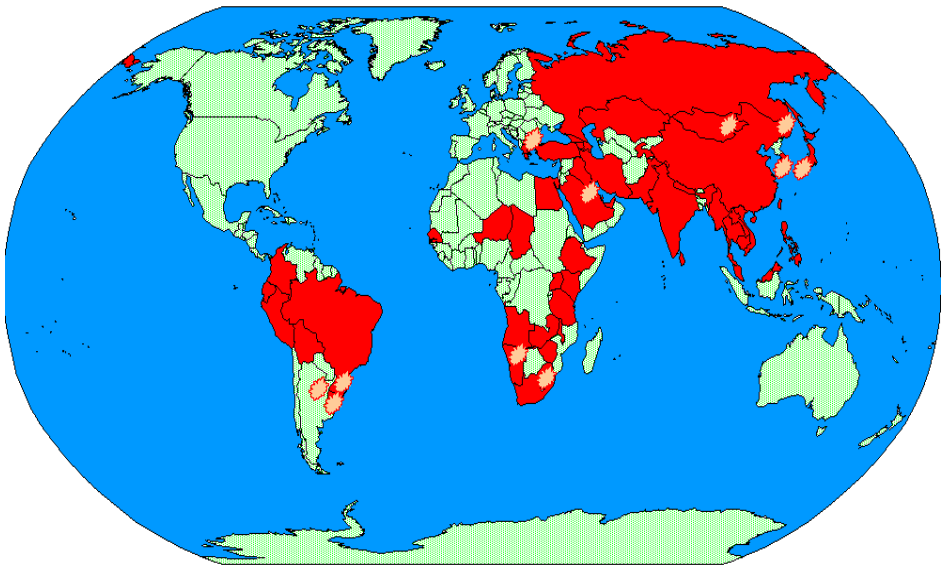
Figure 1: Aphthous ulcers in a cow with FMD.

Infection causes fever, chills and anorexia in affected animals. Vesicles or aphthae develop on buccal and nasal mucous membranes, and at the hoof—hence the name. Mammary glands may also be affected. Secondary infections often develop as the vesicles rupture. Lip-smacking, tooth-grinding, drooling and lameness may result from the painful lesions. Pigs with affected hooves may walk on their knees. Calves and piglets may develop myocarditis. Cows, sheep and goats will develop reduced milk production--up to 50%. The reduction may last only 2-3 days, but can be permanent. Recovery from foot-and-mouth disease takes about 8-15 days, but animals may be left with tongue erosions, deformed hooves, permanent loss of weight, and loss of heat control.

Prevention

Limiting the spread of foot-and-mouth disease is a key to its prevention. Currently, this is accomplished through two general routes: immunization and sanitary prophylaxis. Sanitary prophylaxis consists of the protection of foot-and-mouth disease-free zones through control of animal movement across borders and through diligent surveillance; slaughter of infected, recovered, and case-contact animals; disinfection of premises and all infected materials (tools, cars, clothes, etc.). Dead animals are promptly buried; infected wastes and fodder are burned. A two-shot, inactivated virus vaccination is available, but full immunity can take up to six months to develop and depends on the antigenic relationship between the vaccine and the outbreak strain.

Fig 2: Map displaying countries affected by foot-and-mouth disease outbreaks



Foot-and-mouth Disease in the Republic of Korea

For 66 years, Korea was considered a foot-and-mouth disease-free country where vaccination was not necessary. Then, in March 2000, the first case was found in the Paju district of the Gyeonggi Province. At that time, 2,223 animals were killed to prevent further disease spread. The yellow dust storms were felt to have introduced the virus into Korea.

A second epidemic appears to have begun this May. On 3MAY02, the first ill pigs were seen in the Anseong district in Gyeonggi Province. On 4MAY02, a second case was found at Jincheon in the northern part of Chungcheong Province, approximately 25 kilometers from the Anseong case. By 8MAY02, more ill pigs were found in Anseong, at a farm approximately 17 kilometers from the original case. Two days later the disease had spread to the Yongin district in Gyeonggi Province. A total of eight farms have been affected at this point.

During these tense days, the ROK government quickly developed a slaughter and vaccination policy to limit the spread of the disease. Every animal on affected farms has been slaughtered, while those on uncontaminated farms are being vaccinated. A quarantine has been placed on all animals in the affected areas, with strict movement controls in place. Additional restrictions limit the movement of vehicles and people in the surrounding areas.

--contributed by MAJ Lisa Forsyth and CPL Kim, Daeyong

References

National Veterinary Research and Quarantine Service of Korea: http://www.nvrqs.go.kr/
Office International des Epizooties: http://www.oie.int/

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PRE-DEPLOYMENT Health Assessment

Authority: 10 U.S.C. 136 Chapter 55. 1074f, 3013, 5013, 8013 and E.O. 9397

Principal Purpose: To assess your state of health before possible deployment outside the United States in support of military operations and to assist military healthcare providers in identifying and providing present and future medical care to you.

Routine Use: To other Federal and State agencies and civilian healthcare providers, as necessary, in order to provide necessary medical care and treatment.

Disclosure: **(Military personel and DoD civilian Employees Only)** Voluntary. If not provided, healthcare WILL BE furnished, but comprehensive care may not be possible.

INSTRUCTIONS: Please read each question completely and carefully before marking your selections. Provide a response for each question. If you do not understand a question, ask the administrator.

Demographics

Last Name

First Name **MI**

Deploying Unit

Today's Date (dd/mm/yyyy) / /

Social Security Number - -

DOB (dd/mm/yyyy) / /

Gender

- ○ Male
- ○ Female

Service Branch

- ○ Air Force
- ○ Army
- ○ Coast Guard
- ○ Marine Corps
- ○ Navy
- ○ Other

Component

- ○ Active Duty
- ○ National Guard
- ○ Reserves
- ○ Civilian Government Employee

Pay Grade

- ○ E1
- ○ E2
- ○ E3
- ○ E4
- ○ E5
- ○ E6
- ○ E7
- ○ E8
- ○ E9
- ○ O1
- ○ O2
- ○ O3
- ○ O4
- ○ O5
- ○ O6
- ○ O7
- ○ O8
- ○ O9
- ○ O10
- ○ W1
- ○ W2
- ○ W3
- ○ W4
- ○ W5
- ○ Other

Location of Operation

- ○ Europe
- ○ SW Asia
- ○ SE Asia
- ○ Asia (Other)
- ○ South America
- ○ Australia
- ○ Africa
- ○ Central America
- ○ Unknown

Deployment Location (IF KNOWN) (CITY, TOWN, or BASE):

List country (IF KNOWN):

Name of Operation:

Administrator Use Only

Indicate the status of each of the following:

Yes	No	N/A	
○	○	○	Medical threat briefing completed
○	○	○	Medical information sheet distributed
○	○	○	Serum for HIV drawn within 12 months
○	○	○	Immunizations current
○	○	○	PPD screening within 24 months

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PLEASE FILL IN SOCIAL SECURITY # ☐☐☐ - ☐☐ - ☐☐☐☐

Health Assessment

1. Would you say your health in general is: ○ Excellent ○ Very Good ○ Good ○ Fair ○ Poor
2. Do you have any medical or dental problems? ○ Yes ○ No
3. Are you currently on a profile, or light duty, or are you undergoing a medical board? ○ Yes ○ No
4. Are you pregnant? (FEMALES ONLY) ○ Don't Know ○ Yes ○ No
5. Do you have a 90-day supply of your prescription medication or birth control pills? ○ N/A ○ Yes ○ No
6. Do you have two pairs of prescription glasses (if worn) and any other personal medical equipment? ○ N/A ○ Yes ○ No
7. During the past year, have you sought counseling or care for your mental health? ○ Yes ○ No
8. Do you currently have any questions or concerns about your health? ○ Yes ○ No

Please list your concerns: _____

_____

Service Member Signature

I certify that responses on this form are true. ☐

Pre-Deployment Health Provider Review (For Health Provider Use Only)

After interview/exam of patient, the following problems were noted and categorized by Review of Systems. More than one may be noted for patients with multiple problems. Further documentation of problem to be placed in medical records.

REFERRAL INDICATED

- ○ None
- ○ Cardiac
- ○ Combat / Operational Stress Reaction
- ○ Dental
- ○ Dermatologic
- ○ ENT
- ○ Eye
- ○ Family Problems
- ○ Fatigue, Malaise, Multisystem complaint
- ○ GI
- ○ GU
- ○ GYN
- ○ Mental Health
- ○ Neurologic
- ○ Orthopedic
- ○ Pregnancy
- ○ Pulmonary
- ○ Other _____

FINAL MEDICAL DISPOSITION:

○ **Deployable** ○ **Not Deployable**

Comments: (If not deployable, explain)

_____

_____

_____

I certify that this review process has been completed.

Provider's signature and stamp:

☐

Date (dd/mm/yyyy) ☐☐ / ☐☐ / ☐☐☐☐

End of Health Review

SEXUALLY TRANSMITTED DISEASES (CONTINUED)
have sexual contact. Hepatitis B is widespread, and human immunodeficiency virus (HIV) also occurs. Though the immediate impact of hepatitis B and HIV on an operation is limited, the long-term impact on your individual health is substantial. See GTA 08-05-062 for appropriate countermeasures.

HIGH ELEVATIONS
High altitude illnesses can kill. Afghanistan and Pakistan operations occurring at elevations over 6,000 feet can seriously impact unit and individual effectiveness. Serious illness or death can result if you ascend rapidly without allowing for acclimatization. Remain well hydrated; individual water requirements are greater at higher altitudes.

- When deployed to high mountain areas, be observant of the common symptoms of mountain sickness: headache, nausea, vomiting, dizziness, fatigue, irritability, and coughing. Seek medical attention immediately if you experience any of these symptoms.
- Pyridostigmine bromide tablets may increase the chance of dizziness or fainting during the first 24 hours at high altitude if you are not acclimatized.
- Lower oxygen levels at high altitudes ("thin air") combined with the heavier work requirements when wearing mission-oriented protective posture (MOPP) gear can increase your risk of high altitude illnesses. When wearing MOPP gear at higher altitudes, you may require more time and concentration to perform assigned tasks.
- For appropriate countermeasures during high altitude operations, see GTA 08-05-062 and GTA 08-05-060, *A Soldier's Guide to Staying Healthy at High Elevations*.

HEARING PROTECTION
It is essential that you use properly fitted hearing protection during military operations. Exposure to high-intensity noise may cause hearing loss that can adversely affect your combat effectiveness and individual readiness. Good hearing is essential and required for mission success. If you are a dismounted soldier, the Combat Arms Earplug (NSN 6515-01-466-2710) will protect you from the impact noise of weapons fire while only slightly interfering with voice communications and detection of combat sounds such as vehicle noise, footfalls in leaves, and the closing of a rifle bolt. While not as effective as the Combat Arms Earplug in preserving your ability to hear important mission-related sounds, noise muffs or standard earplugs are very effective at preventing noise-induced injury. If you are a member of vehicle or helicopter crews, your combat vehicle crew or aircrew helmets have built-in hearing protectors.

ORAL HEALTH
Dental disease is a common problem during deployments due to the challenge of maintaining good oral hygiene. You should deploy with toothbrush, dental floss, and fluoride toothpaste. Daily flossing and twice daily brushing of teeth is the best way to ensure prevention of periodontal disease and to decrease your risk of problems such as trench mouth and tooth decay. In difficult tactical environments, teeth should be brushed at least once a day. Seek medical attention immediately at the onset of any dental problems.

PRE-DEPLOYMENT HEALTH INFORMATION

- Complete the Pre-Deployment Health Assessment (DD FORM 2795) to assess your state of health before deployment and to assist health care providers in identifying your medical needs and providing present and future medical care to you.
- You will not have access to your health care record during the deployment. The Adult Preventive and Chronic Care Flowsheet (DD FORM 2766) will be used as your deployment health record. This document will include information on all your immunizations, any medications you are currently taking, and any ongoing medical problems that you may have. When you go through readiness processing, ensure that all appropriate information is documented on your DD FORM 2766. When you return home, this information will be placed in your regular health record.

INFORMATION ABOUT YOUR HEALTH CARE WHILE DEPLOYED

- It is important that you know where to seek health care while deployed. This may or may not be through the same channels as your home station. Ask your chain of command for more information.
- While deployed, you must maintain your health and seek care whenever an illness or injury threatens your ability to complete your tasks. Your unit is depending on you. It is always better to seek care early so that your problems can be documented appropriately and taken care of immediately.

POST-DEPLOYMENT HEALTH INFORMATION

- Complete the Post-Deployment Health Assessment (DD FORM 2796) to assess your state of health after deployment and to assist health care providers in identifying your medical needs and providing present and future medical care to you.
- If you become sick after you return home, tell your physician that you were deployed.
- Complete malaria medications as directed, and receive follow-on medical care/tests as directed.

Contact your Preventive Medicine or Medical Support Unit for more information.

DISTRIBUTION: UNLIMITED

Prepared by:

U.S. Army Center for Health Promotion & Preventive Medicine
http://chppm-www.apgea.army.mil

SIPRNet: http://usachppm1.army.smil.mil

(800) 222-9698/ DSN 584-4375/(410) 436-4375

SHG 001-0302

A SOLDIER'S GUIDE TO STAYING HEALTHY IN AFGHANISTAN AND PAKISTAN

This country-specific guide should be used in conjunction with GTA 08-05-062, *Guide to Staying Healthy*, and is intended to provide information that can help reduce your risk of Disease and Non-battle Injuries (DNBI) when deployed. This health threat and countermeasure information is based on the most current data available from U.S. Department of Defense medical agencies at the time of production. In addition to the information in this guide, you should also receive force health protection, health threat, and preventive medicine countermeasures training/briefings prior to and, as required, throughout the length of your deployment.

AFGHANISTAN OVERVIEW
Afghanistan is approximately the size of Texas and is divided into three geographic regions. The elevation ranges from 500 feet above sea level in the Southwestern Plateau to 25,000 feet in the Central Highlands. Afghanistan has a mostly dry climate marked by seasonal, regional, and daily temperature extremes. The country also has the "Wind of 120 Days," which blows from June through September at velocities that occasionally exceed 110 mph. In the west, mean daily maximum temperatures in summer (April through September) and winter (October through March) generally are 20° F warmer than those in Kabul; extreme winter highs and lows are 100° F and -3° F, respectively. Countrywide, the extreme summer high temperature is 118° F in the west, and the extreme low temperature is -4° F in Kabul. The rainy season lasts from October through April. Although rainfall usually is scant, periodic heavy rains combined with melting snow have caused flooding. Generally, no area receives more than 15 inches of rain annually.

PAKISTAN OVERVIEW
Pakistan is approximately twice the size of California and is divided into four geographic regions. The elevation ranges from sea level to 26,000 feet in the Himalayan mountain ranges. Pakistan has significant daily, regional, and seasonal temperature variations. Tropical cyclones, causing devastating flooding and wind damage, may occur during June and July. Daily variations of 20° to 30° F occur throughout most of the interior regions. During the dry, cool winter (December through February), mean daily temperatures are 57° F on the Indus Plain, 68° F along the coast, and 4° F in the northern mountains. During the summer (March through May), mean daily temperatures are 84° F along the coast, 95° F in the desert region and on the Indus Plain, and 32° F in the mountains. The monsoon seasons, June through July and October through November, bring periodic flooding and deliver an annual average rainfall of 60 inches in the Northern Highlands, 5 inches in the Baluchistan Plateau, 15 inches in the river valleys, 6 to 8 inches along the coast, and 4 inches in the desert region.

AFGHANISTAN AND PAKISTAN RISK ASSESSMENT
Based on a combination of all major infectious diseases that occur in a country, an overall country risk level is assigned from low to highest risk. Afghanistan and Pakistan are HIGH-RISK countries for infectious diseases and high altitude illnesses. Diseases of military importance to forces deployed in Afghanistan and Pakistan include hepatitis A and E, typhoid fever, and diarrheal diseases such as cholera, all acquired by consuming contaminated food, water, and dairy products; vector-borne diseases such as malaria, dengue fever, Crimean-Congo hemorrhagic fever, leishmaniasis, West Nile virus, sandfly fever and louse-borne typhus which are acquired through the bites of various insects and ticks; tuberculosis acquired from person-to-person respiratory transmission; leptospirosis from swimming, wading, or skin contact with contaminated water; rabies from animal contact; and sexually transmitted diseases. Environmental factors also pose a significant health risk to deployed forces and include sewage, agricultural, and industrial contamination of water and food supplies; extreme night and day temperature changes; localized air pollution; and severe sandstorms and dust storms. Additionally, high altitude illnesses are a potentially significant DNBI in the mountainous regions of Afghanistan and Pakistan.

INCREASED REGIONAL DISEASE THREATS
Civil and military conflicts over the last three decades and recent antiterrorist activities have decimated the Afghan public health infrastructure. This situation has worsened by the recent departure of many relief agencies. Three years of continuous drought has led to widespread crop failures and water shortages. There are approximately 1 million internally displaced persons and another 4-5 million refugees who have fled from Afghanistan into bordering countries. The combination of food shortages, lack of an adequate public health infrastructure, refugee movement, and increased congregations of malnourished people significantly increase the likelihood of infectious disease transmission.

Overcrowding associated with cold weather and congregations of displaced persons is highly conducive to the transmission of respiratory illnesses such as diphtheria, tuberculosis, measles, and influenza. Tuberculosis rates in Afghanistan are among the highest in the world. Avoidance of congregations of people and livestock is essential to reduce your risk of infection. Displaced populations living in temporary camps with unsanitary conditions are extremely vulnerable to widespread typhoid fever outbreaks. Drought conditions also result in congregation of livestock, increasing the risk of animal-to-human transmission of diseases such as anthrax by possible exposure to anthrax spores in the environment.

Do not consume any locally produced raw or processed grain or dairy products. During periods of extended drought, chemically treated grains meant for seed only or grains that were harvested or stored inadequately may enter local food channels. These grains may be contaminated with toxic pesticides, weed seeds and mold spores. Consuming bread products or milk from animals that have consumed contaminated grains may result in serious chronic or acute health effects.

FIELD SANITATION TEAM
Each company-sized unit has a Field Sanitation Team (FST) whose members are trained (40-hour course) and fully equipped IAW AR 40-5, FM 4-25.12, and FORSCOM REG 700-2. Know who the members of your FST are, and know how they can assist in preventing medical threats to your health. Become familiar with FST equipment and training.

VECTOR-BORNE DISEASES
There are several vector-borne diseases present in Afghanistan and Pakistan. They include malaria, dengue fever, and West Nile virus from mosquitoes; leishmaniasis and sandfly fever from sand flies; Crimean-Congo hemorrhagic fever from ticks; and louse-borne typhus from the human body louse (head lice or pubic lice play no role in transmission). Many other diseases are spread by the bites of mosquitoes, ticks, sand flies, fleas, mites, and lice. Your local medical authority will determine if these diseases or other vector-borne diseases are a threat in your specific location and provide appropriate countermeasures.

- Take your malaria prevention pills when directed to do so. This is CRITICAL. Normally, you will begin taking medication prior to arriving in the area, while in the area, and after returning home.
- Use the DOD Insect Repellent System detailed in GTA 08-05-062 to reduce your risk of acquiring a vector-borne disease. Wear permethrin-treated uniforms with trousers bloused and sleeves down.
- When deployed to this region, sleep under a permethrin-treated bed net to repel insects and further reduce risks of vector-borne diseases. Many insects in this region feed during the night, including mosquitoes that transmit malaria.
- When using both DEET and sunscreen products, apply sunscreen to the skin first so it does not interfere with the effectiveness of the DEET. After 30 minutes to an hour, apply the DEET. This allows the sunscreen to penetrate and bind to the skin first.

HAZARDOUS ANIMALS AND PLANTS

- Several species of highly poisonous snakes, which are well camouflaged and very aggressive, live in the region. Consider any snake encountered as poisonous, and do not handle. Seek immediate medical attention if bitten; untreated snakebites may cause serious illness or death within 1 hour.
- Several species of scorpions and spiders, some with potentially fatal venom, are present throughout the region. If possible, avoid sleeping on the ground. Shake out boots, bedding, and clothing prior to use, and never walk barefoot. If bitten or stung, seek medical attention immediately.
- Some regional plants have thorns, stinging hairs, or toxic resins that may puncture the skin or introduce poison into the skin causing skin irritation, rashes or infections. Avoid skin contact with plants when tactically feasible.
- Contact with the smoke from the burning of these plants can also cause skin rashes and damage to your lungs.
- Clean your clothing after contact with harmful plants. Decontaminate clothing by washing with soap and water.
- Some regional plants may cause systemic poisoning if leaves, berries, flowers, or other plant parts are chewed or swallowed. Symptoms include dizziness, vomiting, irregular heartbeat, and delirium or hallucinations.

SAND, WIND, AND DUST
Sand, wind, and dust cause health problems, particularly to skin, eyes, throat and lungs. Take care of problems early to avoid infection. Dry air, dust and wind dry out the nose and throat and can also cause nosebleeds, coughing and wheezing. Cracked, chapped fingers reduce manual dexterity. Body areas (such as ears, armpits, groin, elbows, knees, feet, and the area under breasts) that collect dust and sand are susceptible to chafing, abrasion and infection. High winds can turn tent pegs and loose objects into flying missiles (which may not be visible in blowing sand).

- Take a daily sponge bath, using an approved water source.
- Wash your face and eyelids several times per day.
- Carry at least two pairs of glasses and a copy of your prescription. Do not wear contact lenses; AR 40-63 prohibits contact lens use during a military deployment.
- Breathe through a wet face cloth, or coat the nostrils with a small amount of petroleum jelly to minimize drying of mucous membranes. Protect your lips with lip balm.
- Shield your face with cloth materials to protect from blowing dust and sand.
- Wear goggles to protect your eyes from wind, dust and sand or when traveling in open vehicles.
- Wear gloves and use moisturizing skin lotion to protect your hands.

HOT AND COLD WEATHER INJURIES
Temperature extremes in this region may impact military operations. The effects of cold weather are more severe in high mountainous areas due to reduced oxygen and lower air pressure. When deploying to the mountainous areas in this region, check with your unit on the requirement for packing the extended cold weather clothing system. See GTA 08-05-062 for appropriate countermeasures.

FOOD-BORNE AND WATER-BORNE DISEASES
Do not consume any food, water, or beverages (to include bottled water) that have not been approved by the U.S. military. Assume all non-approved food, ice, and water is contaminated. Water and food items available in Afghanistan and Pakistan, including dairy products, fish, fruits, and vegetables, may contain unsafe levels of pesticides, chemical fertilizers, bacteria, and viruses. Contamination with human or animal waste is widespread. Even a one-time consumption of these foods or water may cause severe illness. See GTA 08-05-062 for appropriate countermeasures.

TOXIC INDUSTRIAL CHEMICALS AND MATERIALS
When deployed, you may face health risks from industrial chemicals and materials as a result of activities by terrorists or warring parties; accidents related to improper design, maintenance, or operation of indigenous industrial facilities; inadvertent exposure to toxic waste materials in the environment; or improper handling or disposal of hazardous materials with which our own forces deploy. The degree of health risks depends upon many parameters. Consult your medical authority for additional information.

SEXUALLY TRANSMITTED DISEASES
Sexually transmitted diseases are highly prevalent in this region. Gonorrhea, chlamydia, and other infections are common, and may affect a high percentage of personnel who

ORAL HEALTH

Dental disease is a common problem during deployments due to the challenge of maintaining good oral hygiene. You should deploy with toothbrush, dental floss, and fluoride toothpaste. Daily flossing and twice daily brushing of teeth is the best way to ensure prevention of periodontal disease and to decrease your risk of problems such as trench mouth and tooth decay. In difficult tactical environments, teeth should be brushed at least once a day. Seek medical attention immediately at the onset of any dental problems.

PRE-DEPLOYMENT HEALTH INFORMATION

- Complete the Pre-Deployment Health Assessment (DD FORM 2795) to assess your state of health before deployment and to assist health care providers in identifying your medical needs and providing present and future medical care to you.
- You will not have access to your health care record during the deployment. The Adult Preventive and Chronic Care Flowsheet (DD FORM 2766) will be used as your deployment health record. This document will include information on all your immunizations, any medications you are currently taking, and any ongoing medical problems that you may have. When you go through readiness processing, ensure that all appropriate information is documented on your DD FORM 2766. When you return home, this information will be placed in your regular health record.

INFORMATION ABOUT YOUR HEALTH CARE WHILE DEPLOYED

- It is important that you know where to seek health care while deployed. This may or may not be through the same channels as your home station. Ask your chain of command for more information.
- While deployed, you must maintain your health and seek care whenever an illness or injury threatens your ability to complete your tasks. Your unit is depending on you. It is always better to seek care early so that your problems can be documented appropriately and taken care of immediately.

POST-DEPLOYMENT HEALTH INFORMATION

- Complete the Post-Deployment Health Assessment (DD FORM 2796) to assess your state of health after deployment and to assist health care providers in identifying your medical needs and providing present and future medical care to you.
- If you become sick after you return home, tell your physician that you were deployed.
- Complete malaria medications as directed, and receive follow-on medical care/tests as directed.

Contact your Preventive Medicine or Medical Support Unit for more information.

DISTRIBUTION: UNLIMITED

Prepared by:

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SHG 011-0302

A SOLDIER'S GUIDE TO STAYING HEALTHY IN THE PHILIPPINES

This country-specific guide should be used in conjunction with GTA 08-05-062, *Guide to Staying Healthy*, and is intended to provide information that can help reduce your risk of Disease and Non-battle Injuries (DNBI) when deployed. This health threat and countermeasure information is based on the most current data available from U.S. Department of Defense medical agencies at the time of production. In addition to the information in this guide, you should also receive force health protection, health threat, and preventive medicine countermeasures training/briefings prior to and, as required, throughout the length of your deployment.

PHILIPPINES OVERVIEW

The Philippines is a grouping of more than 7,100 islands, with a total land area of approximately 116,000 square miles, equaling an area slightly larger than Arizona. Eleven of these islands contain more than 94 percent of the land area, and only 462 islands have a land area of more than 1 square mile. Larger islands are mountainous, with narrow strips of lowlands along the coasts. Nearly all of the major islands have interior mountain ranges with average heights of 3,900 to 7,000 feet. The highest elevation is Mt. Apo, which reaches an elevation of approximately 9,800 feet. Most of the islands have active volcanoes. The climate in the Philippines is mostly tropical. Temperatures are uniform, with an average daily range between 79° and 82° F. The northeastern monsoon brings cool, dry air from December through February, while the southwestern monsoon brings heavy rain from May through November. In general, the western regions receive between 80 to 140 inches of precipitation annually, the eastern regions receive less than 120 inches, and the Cagayan Valley in northern Luzon and the Cotabato and Dayao-Agusan Valleys on Mindanao receive less than 70 inches annually.

PHILIPPINES RISK ASSESSMENT

Based on a combination of all major infectious diseases that occur in a country, an overall country risk level is assigned as low, intermediate, high, or highest risk. The Philippines is HIGH RISK for infectious diseases. Diseases of military importance to forces deployed to the Philippines include hepatitis A and E, typhoid/paratyphoid fever, and diarrheal diseases such as cholera, bacterial diarrhea, and protozoal diarrhea, all acquired by consuming contaminated food, water, and dairy products; vector-borne diseases such as malaria, dengue fever, Chikungunya fever, Japanese encephalitis, and scrub typhus which are acquired through the bites of mosquitoes and mites; schistosomiasis and leptospirosis from swimming, wading, or skin contact with contaminated water; rabies from animal contact; and sexually transmitted diseases.

PHILIPPINES RISK ASSESSMENT (CONTINUED)
Environmental factors also pose a significant health risk to deployed forces and include sewage, agricultural, and industrial contamination of water and food supplies; high heat and humidity; high levels of air pollution in urban areas; and natural disasters.

INCREASED REGIONAL DISEASE THREATS
There is significant risk in this country for acquiring incapacitating mosquito-borne diseases including dengue fever and malaria. These diseases are transmitted throughout the country year-round, day and night, in both urban and rural areas. The risk for dengue fever is highest in urban environments, and the risk for malaria is highest in rural areas. Although Manila and other major cities are malaria-free, do not stop taking your malaria prevention medication unless directed by your medical authority. The increased risk of these mosquito-borne diseases is elevated during and immediately after the rainy season when the mosquito population increases. Preventing exposure to mosquitoes and other biting vectors at all times and in all areas will help reduce your risk of acquiring vector-borne diseases.

The Philippines is considered one of the most disaster-prone countries in the world. The main hazards are typhoons, storm surges, floods, volcanoes, earthquakes, tsunamis (large tidal waves), and landslides. Although typhoons have been reported during every month of the year, they generally occur from June through November. It is not uncommon for 30 or more of these storms to occur during a single typhoon season.

Trash management has developed into a crisis in Manila due to lack of available disposal sites. The crisis has resulted in an increase in indiscriminate disposal, insect and rodent infestations, and water pollution. The situation will only worsen until an effective solution is employed.

FIELD SANITATION TEAM
Each company-sized unit has a Field Sanitation Team (FST) whose members are trained (40-hour course) and fully equipped IAW AR 40-5, FM 4-25.12, and FORSCOM REG 700-2. Know who the members of your FST are, and know how they can assist in preventing medical threats to your health. Become familiar with FST equipment and training.

FOOD-BORNE AND WATER-BORNE DISEASES
The diseases of greatest risk throughout the Philippines are bacterial diarrhea, hepatitis A and typhoid fever associated with contaminated food, water, and ice. Do not consume any food, ice, water, or beverages (to include bottled water) that have not been approved by the U.S. military. Assume all non-approved food, ice, and water is contaminated. Water, ice, and food items available in this region, including dairy products, fish, fruits, and vegetables, may contain unsafe levels of pesticides, chemical fertilizers, heavy metals, bacteria, and viruses. Contamination with human or animal waste is widespread. Even a one-time consumption of these foods or water may cause severe illness.

VECTOR-BORNE DISEASES
There are several vector-borne diseases present throughout this region. Significant disease transmission is sustained year-round to include urban areas. The disease threats include malaria, dengue fever, Chikungunya fever, and Japanese encephalitis from mosquitoes and scrub typhus from mites. Many other diseases are spread by the bites of mosquitoes, ticks, sand flies, fleas, mites, and lice. Your medical authority will determine if these diseases or other vector-borne diseases are a threat in your specific location and provide appropriate countermeasures.

- Take your malaria prevention pills when directed to do so. This is CRITICAL. Malaria is widespread in this region. Normally, you will begin taking medication prior to arriving in the area, while in the area, and after returning home.
- Use the DOD Insect Repellent System detailed in GTA 08-05-062 to reduce your risk of acquiring a vector-borne disease. Wear permethrin-treated uniforms with trousers tucked into boots, sleeves rolled down, and undershirt tucked into trousers. Wear DEET on exposed skin.
- When deployed to this region, sleep under a permethrin-treated bed net to repel insects and further reduce risks of vector-borne diseases. Many insects in this region feed during the night, including mosquitoes that transmit malaria.
- When using both DEET and sunscreen products, apply sunscreen to the skin first so it does not interfere with the effectiveness of the DEET. After 30 minutes to an hour, apply the DEET. This allows the sunscreen to penetrate and bind to the skin first.

HAZARDOUS ANIMALS AND PLANTS

- Several species of highly poisonous snakes, which are well camouflaged and very aggressive, live in the region. Venomous sea snakes are found throughout the Philippines coastal waters, including lakes and rivers. Consider any snake encountered as poisonous, and do not handle. Seek immediate medical attention if bitten; untreated snakebites may cause serious illness or death within 1 hour.
- Several species of spiders capable of inflicting a painful bite and one species capable of inflicting a life-threatening bite are present throughout the country. If possible, avoid sleeping on the ground. Shake out boots, bedding, and clothing prior to use, and never walk barefoot. If bitten, seek medical attention immediately.
- Venomous fish and jellyfish species, some of which can cause fatalities, are found throughout the Philippines. Avoid swimming or wading unless tactically required.
- Some regional plants have thorns, stinging hairs, or toxic resins that may puncture the skin or introduce poison into the skin causing skin irritation, rashes or infections. Avoid skin contact with plants when tactically feasible.
- Contact with the smoke from the burning of these plants can also cause skin rashes and damage to your lungs.
- Clean your clothing after contact with harmful plants. Decontaminate clothing by washing with soap and water.
- Some regional plants, often with fruit similar in appearance to that of edible plants, may cause systemic poisoning if leaves, berries, flowers, or other plant parts are chewed or swallowed. Symptoms include dizziness, vomiting, irregular heartbeat, and delirium or hallucinations.

HEAT INJURIES
High heat and humidity is a significant medical threat when deployed to this region, especially during the early phase of deployment; acclimatization is critical. Individual and unit countermeasures are extremely important. See GTA 08-05-062 for appropriate countermeasures.

SKIN DISEASES
Skin irritations and infections, such as athlete's foot and ringworm, are frequent medical threats during any deployment and are commonly caused by fungi. The best prevention is to maintain clean, dry skin. See GTA 08-05-062 for additional countermeasure information.

TOXIC INDUSTRIAL CHEMICALS AND MATERIALS
When deployed, you may face health risks from industrial chemicals and materials as a result of activities by terrorists or warring parties; accidents related to improper design, maintenance, or operation of indigenous industrial facilities; inadvertent exposure to toxic waste materials in the environment; or improper handling or disposal of hazardous materials with which our own forces deploy. The degree of health risks depends upon many parameters. Consult your medical authority for additional information.

SEXUALLY TRANSMITTED DISEASES
Sexually transmitted diseases are highly prevalent in this region. Gonorrhea, chlamydia, and other infections are common, and may affect a high percentage of personnel who have sexual contact. Hepatitis B and human immunodeficiency virus (HIV) also occur throughout the region. Though the immediate impact of hepatitis B and HIV on an operation is limited, the long-term impact on your individual health is substantial. See GTA 08-05-062 for appropriate countermeasures.

HIGH ELEVATIONS
High altitude areas of operation are not likely in this country. If conducting operations at altitudes over 6,000 feet, see GTA 08-05-062 and GTA 08-05-060, *A Soldier's Guide to Staying Healthy at High Elevations*, for appropriate countermeasures during high altitude operations.

HEARING PROTECTION
It is essential that you use properly fitted hearing protection during military operations. Exposure to high-intensity noise may cause hearing loss that can adversely affect your combat effectiveness and individual readiness. Good hearing is essential to mission success. If you are a dismounted soldier, the Combat Arms Earplug (NSN 6515-01-466-2710) will protect you from the impact noise of weapons fire while only slightly interfering with voice communications and detection of combat sounds such as vehicle noise, footfalls in leaves, and the closing of a rifle bolt. While not as effective as the Combat Arms Earplug in preserving your ability to hear important mission-related sounds, noise muffs or standard earplugs are very effective in preventing noise-induced injury. If you are a member of vehicle or helicopter crews, your combat vehicle crew or aircrew helmets have built-in hearing protectors.

DISEASE TRENDS

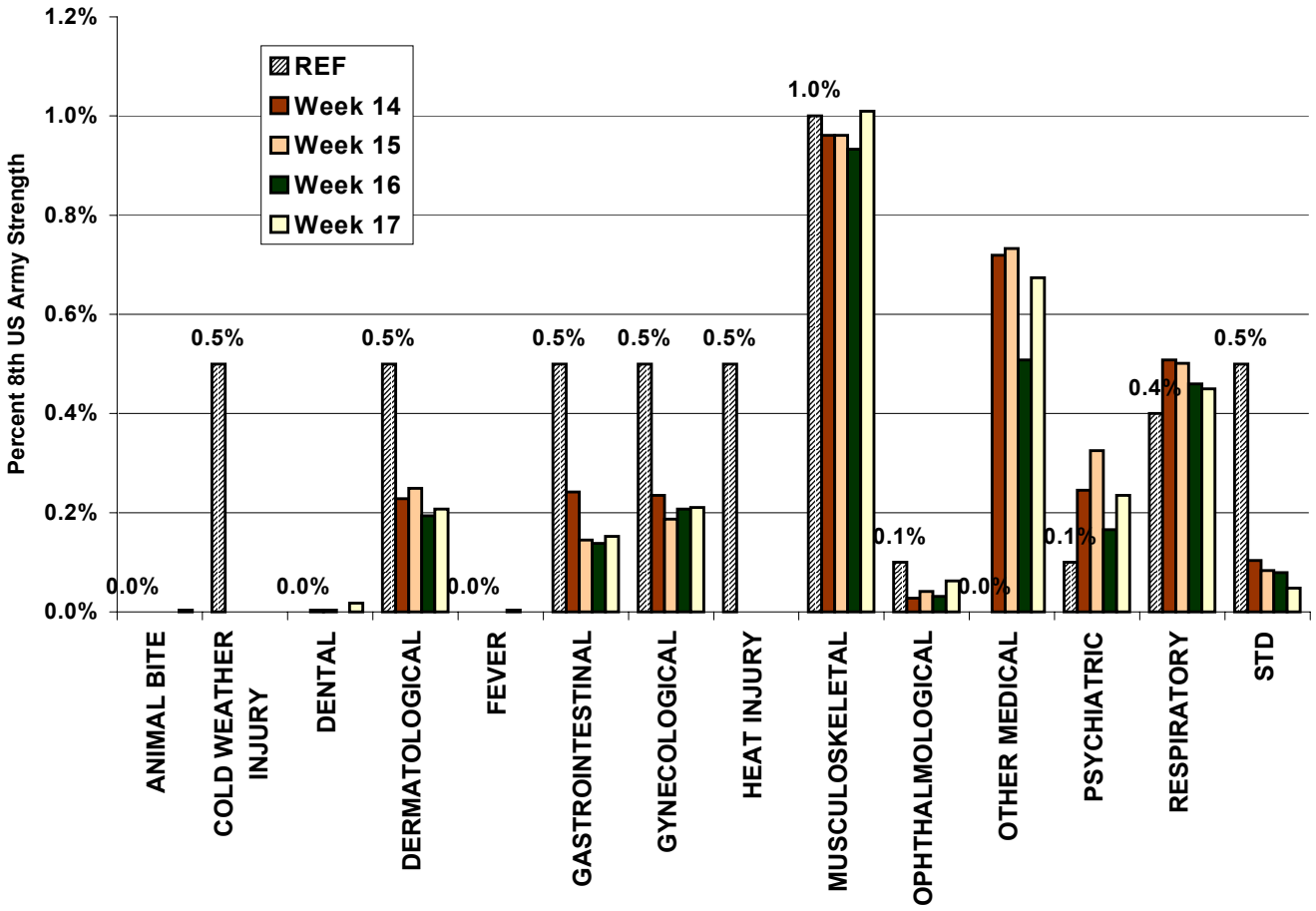
18th MEDCOM Reportable Events Program

Selected Reportable Events Incidence Summary
APR 2002

Reportable Condition	Area I	Area II	Area III	Area IV	Totals
Trichomonas	NR	1	NR	NR	1
Chlamydia	20	9	7	11	47
Herpes simplex	NR	NR	NR	1	1
Gonorrhea	9	3	2	5	19
Syphillis	1	0	0	0	1
HIV	0	0	0	0	0
STD Totals	30	13	9	17	69
Tuberculosis (active disease)	0	0	1	0	1
Tuberculosis (recent converter)	NR	15	3	0	18
Animal Bites	1	1	0	0	2
Cold Weather Injuries	NR	NR	NR	NR	NR
Heat Injury	NR	NR	NR	NR	NR
Deaths from all causes	0	0	0	0	0

NR=None Reported

Distribution of Disease Non-Battle Injury Medical Visits for Active Duty US Army Members Seen in 18th MEDCOM Clinics



Editor's Note: Data for above chart was generated through a manual review of KG-ADS diagnoses given each active duty US Army patient seen in 18th MEDCOM primary care, urgent care, and women's health clinics. Percentages are calculated based on total Army strength. Only one visit for the same disease or injury category was counted. Only KG-ADS data completed within a week or less of the patient visit was accessible. While DNBI tracking traditionally differentiates recreational injuries from training injuries and MVA injuries, the lack of information pertaining to cause of injury in KG-ADS makes this impossible to determine.
Reference rates are taken from the DNBI Reporting Form for Joint Deployments. While the illness rates appear to be well below those suggested by JCS doctrine, this most likely is a reflection of incomplete ADS reporting.

Reported Events Summary, USFK: April 2002

Conditions		Apr 2002	Cum 2002	Cum 2001
STD	Chlamydia	47	142	45
	Gonorrhea	19	51	26
	Herpes Type II	1	2	2
	HIV/AIDS	0	1	
	Trichomonas	1	7	
	Syphilis	1	1	1
Infectious Diseases	Campylobacter	1	1	
	Cholera	0	0	
	E.Coli 0157:H7	0	0	
	Encephalitis	0	0	
	Giardiasis	0	0	
	Hepatitis A	0	0	
	Hepatitis B	1	1	
	Hepatitis C	0	0	
	Influenza	0	0	
	Measles	0	0	
	Meningoccal Meningitis	0	0	1
	Pneumococcal Pneumonia	0	0	
	TB, Active	1	4	2
	PPD Conversion	18	69	19
	Salmonellosis	0	2	3
	Shigellosis	0	0	
	Typhoid Fever	0	0	
	Varicella, adult	0	1	2
Vector-borne Diseases	Dengue Fever	0	0	
	Ehrlichiosis	0	0	
	HFRS	0	0	
	Japanese Encephalitis	0	0	
	Leptospirosis	0	0	
	Malaria	1	2*	12^
	Rabies	0	0	
	Scrub Typhus	0	0	
Injuries	Animal Bites	1	8	17
	Cold Injury	1	3	
	Heat Injury	0	0	5
	CO Poisoning	0	0	
	Lead poisoning	0	0	
	Hearing Loss	0	0	
Immunization	VAERS	0	0	
	Influenza	0	0	

Notes:
**One case represents disease contracted outside the ROK*
^*Indicates cases diagnosed while in the ROK; additional 17 cases were diagnosed after return to US*
Please refer to the reverse of the 18th MEDCOM IHO Reportable Events Worksheet for a complete listing of reportable events. A copy of this form is included at the end of this document.